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THE

Journal of Home Economics

VOL. IX APRIL, 1917 No. 4

PRACTICE HOUSES FOR STUDENTS IN HOME ECONOMICS[1]

ISABEL ELY LORD

Director, School of Household Science and Arts, Pratt Institute

Among those engaged in Home Economics education the term "Practice House" has become so familiar that we take it for granted that there are many of these houses scattered through the country, especially as part of schools training teachers of home economics. It is of this last group that certain definite and detailed questions as to the houses have been asked, and the results are presented here.

But a brief summary of the subject as a whole can hardly be omitted. The practice house by its name implies an attempt to reproduce home conditions (so far as possible) for students of homemaking. It is obvious to anyone that home conditions cannot be adequately reproduced in a school. The family group has a unity, a purpose, and a meaning that must be lacking in any student group. Even the expenditure of a "normal" family can be only planned, not made, by the students. So far as the food problem goes, there may be actual planning, buying, preparation, and serving, but even here it is quite impossible to present the problems arising from individual likes and dislikes, from unexpected family happenings, from sickness, from financial crises. The physical care of the house can be excellent student practice, but it is, and in a school must be, a more carefully ordered, less interrupted process than in the ordinary house.

The very number of students to be trained usually means that a number are working at one time that would be absurd in a house of moderate size, such as would be occupied by the family whose needs are being studied. For example, our little eight room practice house at Pratt Institute,

[1] Presented at the Ninth Annual Meeting of the American Home Economics Association, Ithaca, N. Y., 1916.

whose sister houses have families of four or five with one maid, if any, has at one time five house workers, besides the student hostess. Such groupings are necessary to get our results, but would be ridiculous if we meant them to illustrate the life of the ordinary family.

All this is stated, not in disparagement of the practice house idea, but as a warning that it is useless to strain too hard to make the work "exactly like regular housekeeping." The effort should be rather to make it typical, to offer such practice as can naturally be given to advantage to the student and will prepare her effectively for the home pure and simple. After all, if the school reproduced exactly either the shop or the home, it would cease to be a school. It does not exist to give experience, in any full sense of the term, but to *prepare* for experience.

This preparation for housekeeping experience was until a few years ago given entirely in the laboratory. The jump from laboratory work in cookery to cooking in the home was a big one, and there were many falls and bruises in the taking of it. For children it often proved impossible, and it was here that the laboratory work was first supplemented by work in rooms fitted up like a home—though too often like such an abstract home that the result lacked warmth and attraction. The unfortunate term "model apartment" was often applied to these rooms, which were part of the school building. About the same time (1912) the "housekeeping centers" were started. These were a distinct advance over the school apartments because they gained reality by being in a tenement building or a small, separate house. In some places the name "model flat" was used, but that is rapidly being discarded. It is dangerous to set up anything as "model" and the term invites criticism of all kinds, while the "housekeeping center" and the "practice house" disarm criticism by their modesty of approach.

Many elementary and secondary schools all over the country are equipped with this aid to their home economics work, and there are many more supported by special agencies, such as the Association of Housekeeping Centers in New York, churches, settlements, and other organizations for social betterment.

A very interesting recent development of the idea is in the private boarding schools for girls. Several of the best of these, in most cases those whose students will probably have large incomes to spend, have begun or are planning to begin, courses in homemaking given in a practice house. It is significant that the greatest difficulty found by those who wish to begin this work is in finding the right woman to have charge

of it—one of adequate training and fine personality, with vision to see the possibilities of this opportunity for training those whose problem is not how to make the income meet necessary expenses but how to spend wisely the large surplus left after the necessaries have been provided. This group has a great part in setting the standard of living for those who have smaller incomes, and very little has thus far been given them.

As it has been impossible to cover the whole field in detail in a single contribution, the following limitations have been set for this paper:

1. The data are confined to normal schools, colleges, and universities—our sources of teachers of home economics.

2. Only *separate houses* are described. The apartment is in some places used like the practice house, but in others is used quite differently. No apartments are included here.

In May, 1915, a questionnaire regarding costumes in cookery was sent to the 217 normal schools and colleges having home economics courses, as listed by the JOURNAL OF HOME ECONOMICS in June, 1911. A letter accompanying the questionnaire asked if a practice house was part of the equipment.

The reply was "Yes" from nine, and later six other names were added. A dozen more said that they hoped soon to add a practice house to their equipment. A list of questions was sent to the fifteen already possessing houses, and the data below are compiled from the answers. The colleges and schools are as follows: Berea College, College of Industrial Arts (Denton, Texas), Cornell University, Joseph K. Brick School, Mississippi State College for Women, Oxford College for Women, Pratt Institute, State Normal School (Athens, Georgia), Stevens Point Normal School, Stout Institute, University of Nebraska, University of Minnesota, University of Washington, West Virginia University, Winthrop Normal and Industrial College. As it is not American, the Girls Hostel of the Technical College Training School at Christ Church, New Zealand, is not included here, but it should not be forgotten that our wide-awake neighbor over the seas has at least one real practice house. It should be noted that the University of Illinois was—if available data are correct—the first to open a practice house (in 1908). As this house has now been given up in exchange for an apartment, no description of the work is included here.

The names of the houses have a certain interest. Four are called Practice House (one with the alternative title of Domestic Science Cottage), two the Home Economics Practice Cottage, one the Household

Management Practice Cottage, one Kanahoah, the House of Friends (Mississippi), one the Home Economics Lodge, one the Home Management House, one the Demonstration Cottage, one the Demonstration Home, one the Model Cottage, one the Model Home, one the John Francis Sims Cottage, and one has the alternate name The Penn Cottage.

The houses are owned by the school or college, with the exception of those at Cornell, Pratt Institute, and the University of Minnesota, and West Virginia University. These are rented. The value of the house is given for the following schools: Berea, $500 (a rent of $12 a month is charged, I suppose to the Home Economics department, since Berea owns the house); College of Industrial Arts, $1800; Brick, $5000; Athens, $800; Stout, $7000; Stevens Point, $7500; University of Nebraska, $2000; University of Washington, $3000. The rented houses are as follows: Cornell, value $3000, rent $150; Minnesota, value, $12,000, rent $1100; Pratt, value $5500, rent $570 (including heat and light); West Virginia University, rent $216. All except Pratt have detached or semi-detached houses.

These variations in value are partly because of country or city location, but hardly comparable, as the size and use of the houses differ much.

In only four cases, Berea, Denton, Mississippi, and Stevens Point, were the houses planned for the purpose for which they are now used. Undoubtedly the other schools have made changes in the houses, but they have been in the position of the majority of families, who must accept what someone else planned and built. In the furnishing one might expect more on the part of the school, but in two cases the house was a former student dormitory, not refurnished (Oxford); in one furnishings from a home economics building were used, supplemented by $124 worth of furniture bought out of the profits of renting rooms (Nebraska); and in one the house is rented furnished (Minnesota). In only two cases (Denton $800 and West Virginia $300) was a definite sum assigned for furnishing; and only two more give the cost—Cornell, whose inventory at the end of the first year was $785.07, and Pratt, where the furnishings cost $1373.33, exclusive of the dining room furniture, silver, china, and kitchen utensils, which were transferred from a former apartment in the school.

In five (Cornell, Denton, Mississippi, and for the new furniture, Nebraska and West Virginia), students had the chief part in the original furnishing. Generally it seems to have been held better to have the

furnishings represent the school ideas and ideals rather than those of a single group of students. The houses are apparently generally used by house furnishing classes for purposes of observation, but refurnishing is, of course, not feasible. Even if financially possible, it would be poor home economics. At Pratt all the house furnishing classes go over the house in detail, discussing the reasons for and against colors, materials, types of furniture.

Eight only have available for all visitors inventories giving cost and source of each article—Cornell, Joseph K. Brick, Nebraska, Pratt, Stevens Point, Stout, Washington, West Virginia. Athens is to have one. One (Oxford) has an inventory with costs, but not source. The others have not available inventories. From our experience at Pratt the lack of an inventory seems a serious one. Ours is used constantly by students, and it is a rare visitor who does not take away a note of some item of furniture or equipment, with cost and source, so that she can duplicate it with little trouble. It was in order to be helpful in this way that in furnishing the house we resisted the temptation to "pick up" nice old furniture, which would be easy to us with our knowledge and opportunities, but not of definite help to the ordinary buyer. We therefore chose a good reproduction of a Sheraton table, that anyone can get, though we could undoubtedly have found an old mahogany table at the same price, and would have preferred it if we had considered only our own point of view.

The equipment with labor saving devices is in each house adapted to that type of house and the region. No attempt is made to have a complete set of labor saving devices—if there is such a thing—but only those that the family likely to live in that house might reasonably have. This is, of course, as it should be.

The use of the house differs so much that comparisons can hardly be made. For outside care the students are in no case responsible. For the inside work the arrangements are as shown on the following page.

In eleven cases the students carry their regular work while they are doing Practice House work; in one (Minnesota) they are allowed 3 credits for the nine weeks they are there; in one (Mississippi) they are allowed 1 credit for the six weeks they are in the house; and at West Virginia 2 hours credit for the semester; and in one (Pratt) they concentrate on this problem, carrying during the one week of practice house work no other work except practice teaching.

4 students for 3 months, 2 teachers	Berea
3 months	Brick
4 students for 2 weeks, 1 teacher	Denton
2 weeks each (future plan)	Cornell
4 students for 4 weeks	Oxford
6 students for 1 week	Pratt
10 students for 6 weeks	Mississippi
1 month	Athens
2 weeks	Stout
4 students for 1 month	Stevens Point
9 students for 9 weeks (11 boarders)	Minnesota
1 week	Nebraska
2 or 3 weeks	Washington
1 semester	West Virginia
8 students for 8 days, later 4 days more	Winthrop

Whether the students shall carry their regular work or not depends partly on the way in which the experience is regarded. If it is only supplementary work to that given in the regular laboratories, it may be carried on parallel with other work, but even in that case, it would seem that enough laboratory work in these subjects should be dropped so that this work will not be an addition to the regular—and surely everywhere full—schedule of work. The difficulty, of course, lies in the making up of work. As only a small proportion of the class can be doing the practice house work at any one time, class work must go on as usual, and students excused from it must make up the work in order to build sure foundations for the future. There is no doubt that this is hard, but it seems to us harder to have the student trying to do her regular work and at the same time pass the test of the Practice House.

In that expression I have revealed that we do not look on the work as supplementary to the regular class work in cookery, marketing, serving, care of the house, laundry work, and household administration, but rather as an examination in the students' ability to make a synthesis of all these in actual housekeeping. In our opinion they should give their whole attention to this important problem. It is easy to arrange for the practice teaching by including in the group students whose teaching comes on different days. As the students shift positions and as the laundress has comparatively light work (having only a share of the house linen to wash and iron), the student who has practice teaching on a given day is made laundress.

Full details of the conditions and requirements of work are available for only two of the houses—Nebraska and Pratt. The Nebraska data are in the form of sheets given the students. These sheets give

definite directions for each task. At Pratt a sheet of general directions is given the students, but the working out of details is part of the students' own problem. Some time before the work begins, the instructor in charge of the house meets all the students and explains the general plan of work. She asks the students to make their own groups of six—having in mind the time of practice teaching—and to choose their week. They give her the list when it is ready. Six students go into the house on Monday morning after breakfast and leave late Saturday afternoon. They each take in turn the position of hostess, cook, kitchen maid, waitress, laundress, and chambermaid. The instructor in charge of the house eats every meal with the students, and at one meal—usually luncheon—all the students sit down with her, and give their solution of attractive family service where there is no maid. At the other meals there is formal service and only the hostess sits at table, with the instructor and two other guests. The invitations are part of the regular work, as will be seen from the instructions to students. It is probable that next year we shall have formal service and outside guests at dinner only. We should prefer to do without formal service at any meal, but the students need more practice in this than they can get in the school.

The group, then, prepares 16 meals, 5 for seven people and 11 for nine people—144 single meals. They are given at the beginning of the week $19 in cash, and from this pay all food supplies, ice, kitchen cleaning materials, and candles and flowers for the dining table. The per capita per meal is thus 13¼ cents. They must serve three courses at breakfast, two at luncheon, and four at dinner. They must make all bread, cake, and pastry used, and must serve once a week certain dishes, a frozen dessert, for example. The group plans together for expenditures, so that left-overs may be used. They thriftily sell to the next group anything that is left. Spices and seasonings are furnished without charge, as they cost little per week, and it would cost much in time to account for them. Sugar and flour are bought in quantity, but each group pays for what it uses. They have a chance to buy at cost the preserves and pickles they have put up in class. Other supplies they buy at the local dealers, and as each group supplies only its own needs, they can not buy to the best advantage. The complication of accounting that would result from reselling other supplies than flour and sugar is one argument against it, but a stronger one is that each student needs actual experience in marketing.

The ingenuity of the students in making both ends meet often surprises even experienced instructors. They serve very attractive meals, and no group has ever exceeded the weekly allowance. Some groups have 25 per cent left, but most of them have no more than 2 per cent. They, of course, present itemized accounts.

In addition to the regular meals the group serves tea on Friday to all guests—and often there is a score of them. Friday is the only day we allow visitors at the house while the groups are at work, as it is too great an interruption to have them come through the week. When this visiting day was first planned it did not occur to me to speak of tea, but the student group in the house asked if they might serve it. They said it seemed so inhospitable not to give guests something. Of course I was pleased at this evidence of the spirit of hospitality, and I asked how much they would like me to add to their allowance. "Oh, that's all right," they said. "We don't want any more money. We'll do it out of what we have." And for the first few years whenever I asked an extra guest, as I frequently do, especially when the guest is from the home economics world, I always offered to add to the allowance, and my offer was always refused. The food budget therefore resembles that of the usual family, providing for guests without increase in cost.

The mimeographed sheet given each student going to the house is included here because it may be of interest to other schools to see what we have found it worth while to tell the students. Some of the details will doubtless be mirth-provoking as one reads it first, but every one has been added from experience—an experience now lasting five years.

PRATT INSTITUTE, SCHOOL OF HOUSEHOLD SCIENCE AND ARTS

To students appointed to practical work in the Practice House:

The Practice House exists to enable the full-time students in household science to carry out the theories, to act on the principles, and to uphold the ideals of the School. The students there are at the same time hostesses and guests, and should exercise the courtesy required in both these relations.

The house as a whole should be the care and pride of every student. It is hardly possible for students to be too punctilious in their observance of every rule or tradition of social life.

Students wear the cookery costume except when on duty as hostess. The hostess should wear any simple gown for breakfast or luncheon, but should always dress for dinner. This does not necessarily mean the wearing of

conventional evening dress, but only that a distinct difference should be made. A simple white dress is quite suitable.

Students are asked to bring their own bath-towels, soap (in a case) and wash cloths. They need not bring other towels—whether for personal or kitchen use—oven cloths, holders, whisk brooms, or hand mirrors.

Students are requested to exercise great care as to the order of their rooms. Clothing, shoes, and the like, must not be left lying about or in sight. A sense of orderliness should be the first impression of the house.

Each bathroom has a cabinet with four divisions, one for the small toilet things of each of the four persons using it. Towel racks are provided in the gray room, and near the entrance of the top bathroom. No personal toilet articles or towels are to be left in the bathrooms. Students working on the first floor are to use the toilet in the basement, *not* the one on the second floor.

Overshoes may be kept in the closet under the stairs. The umbrella stand is to be used only for wet umbrellas, dry ones being kept in closets.

Window shades are to be kept at the top of the lower sash except on very dark days, when they may be put up all the way. They are to be drawn in in the evening. Folding doors should always be either entirely open or entirely closed. The position of the furniture in each room should be carefully studied, and no changes made. Dressing tables and chiffoniers should be kept in perfect order. A place for matches is provided in each room, and they should never be placed elsewhere.

Cards are not to be left on the card plate, but given to the instructor in charge.

In showing people the house, show (1) first floor; (2) second floor front; (3) top room; (4) brown room; (5) gray room.

All notes of invitations for breakfast, luncheon, or dinner, are to be sent one week in advance. These are to be written in proper form on note paper of correct size and submitted to the instructor in charge before being mailed. Each hostess will state her home address on her invitations in order that the guest may reply directly to her.

September, 1915.

The details of the Pratt work are given here because the writer knows them well enough to make accurate statements. It would be most interesting to have a series of similar statements from the other schools.

But to return for a moment to the cost of food supplies. For Pratt this is as has been stated, $13\frac{1}{4}$ cents per meal, or $39\frac{3}{4}$ per day. The other figures available give a daily per capita as follows: Berea, $23\frac{2}{7}$ cents; Denton, 30; Athens, 30; Oxford, $28\frac{4}{7}$; Minnesota, 30 to 32. In other cases students pay regular board, but the amount for food is not stated.

The whole expense to the school or college of a practice house is a very important question. Where students live in the house for somewhat long periods, or where they go there from the college dormitory, the students pay regular board, but where the test is a short one and does not relieve the student of living expense to any considerable extent (as at Pratt), the school must bear it all. Figures are not available for other schools, and they are not complete for Pratt, because of the exclusion from the inventory of the dining room furniture, the silver, china, and kitchen utensils, as mentioned before. Also the exact figures are not available for the cost of new hardwood floors and other changes made at the time the house was opened. An estimate of this is, however, given. It should be noted that when there is no group in the house, several students are given rooms there, in return for which they keep the house clean.

Cost of Pratt Institute Practice House

4 per cent interest on cost of furnishing	$54.92
5 per cent depreciation of furnishing	68.65
NOTE.—Replacement of small furnishings included in renewals.	
Renewals	50.00
Rent	570.00
Light, fuel	40.00
Telephone	36.00
Student food	228.00
Extra service (opening and closing)	8.00
	$1055.57
Rent to instructors	350.00
Net cost	$705.57

One point about the practice house work that should not be forgotten is the opportunity it gives for the teaching and practice of what our grandmothers called simply "manners." I am often conscious that we fail in our responsibility to our students because we do not give them definite instruction as to the accepted forms of courtesy, and that we criticize them sometimes for rudeness when the failure to meet social requirements is only a matter of ignorance. We ought to give more attention to this, and the practice house gives an excellent opportunity for observing our success.

It may seem legitimate to add here what we have planned at Pratt

Institute to give the experience in housekeeping, in addition to this test of the Practice House. We value the latter highly, but we realize that it can not meet the need for constant practice. For some years we have given returning students summer work in cookery, in the hope that they would gain in confidence and facility. This work was in special problems, such as bread-making, gelatine mixtures, and the like. It produced results, but they were naturally limited to facility and confidence in only a few processes. This year we have changed entirely to the plan for experience, and require of each returning student that she plan, purchase, prepare and serve three meals a day for fourteen consecutive days for a family of not less than four. This experience will come before that of the Practice House, and we hope that incidently it will make the latter work much easier. The Practice House work is hard now because it is a sort of examination, and the students are afraid of making mistakes. The confidence they gain from the summer work should help them here. They, of course, keep careful accounts for the summer work, and report on a number of points.

But to return to the Practice House. There is enthusiastic unanimity —or unanimous enthusiasm, as you like—regarding it by those who have had one as part of their equipment. As one of the staff at the University of Nebraska says: "A statement of our opinion of the practice cottage idea would read like a testimonial in a vacuum cleaner advertisement— "We have used one for nine months and can say that we would never be without one again."

There is a home feeling for such a house among the students who have lived there. Our Practice House has had so many gifts from student groups and alumnae—a beautiful bedspread of Italian cutwork, filet, and embroidery, Oriental rugs, a beautiful Japanese print, a silver platter, silver tray, and other articles that we always call "wedding presents," that I have begun to explain to students and alumnae that we must not have many more, or we shall be getting beyond the family who is supposed to live in such a home. Every student in the school— though her work may be as remote from housekeeping as trade dressmaking—is each year invited to the house to tea. The junior household science students go over there for their first experience in serving afternoon tea. Once a year the neighbors are invited in for the hospitable cup, and each member of our school faculty dines or lunches there every year.

This description of the Pratt Practice House is doubtless true, in everything except detail, of all the other houses. They may be for a time a serious matter to the student undergoing the test, but the abiding memory is one of an approach to the easy intimacy of family life, and the aroma of the gracious spirit of hospitality.

EQUIPPING A DIET KITCHEN

RUTH McNARY SMITH

Formerly Dietitian at Fairmont Hospital, San Francisco

It is impossible to consider an institutional kitchen and its equipment separately. Not only must every article be purchased for a definite purpose, but for a definite place as well. In the case of a hospital, the equipment purchased will depend largely upon whether there is one central diet kitchen, or a smaller kitchen on each floor, to which the cooked food is sent, and there placed upon trays. The size of the institution must also be considered. The type and capacity of articles of equipment must be suitable to the maximum quantity of food required. The diet kitchen referred to in this paper was designed to serve about seventy-five patients. All vegetables were prepared for cooking and most of the meat was cooked in the larger kitchen of the hospital, and then sent by dumb waiter to the diet kitchen. Aside from this, all the food for the trays was prepared and served in the small kitchen, by four nurses and three tray-boys.

It is no longer considered desirable to devote a large space of indefinite proportions to the kitchen of a hospital. We have seen the possibilities of a ship's galley, or the kitchen of a dining car, and might well adopt such compactness and efficiency of arrangement. It is not plenty of room that is required so much as room so well planned that there is neither uncomfortable crowding nor waste space to traverse. Much depends on this—the number of employees required, the time necessary to prepare and serve a meal, and the fatigue which results, legitimate or otherwise. In the diet kitchen referred to, such was the compactness of the arrangement that it was possible to serve seventy trays, consisting of a variety of diets, in approximately one-half hour.

The first thing to consider in equipping a diet kitchen, is the selection of the larger articles such as the steam table, stove, sterilizer, and refrigerator. These should be of such excellent material and construction that ten years service will only occasion smaller repairs or replacement.

Steam table. The steam table selected for this kitchen had two meat pans and six food receptacles of heavy pottery. Metal or enamel iron pots are not an economy. The covers were of german silver which looked well but required more care than copper. The lower portion was enclosed for the purpose of heating dishes. A steam table must be steam tight or it is a failure, as the food is likely to be soggy rather than crisp and hot. If it is impossible to use steam from the heating system, a gas table may be substituted.

Stove. A good gas range having six burners, two large ovens, a cake oven with glass door, and a broiler, was entirely adequate, with the addition of two double plates and a single one. The stove had several white enamel surfaces which required frequent cleaning. For this reason a plain steel oven would be preferable, unless there was plenty of service. It is important that the hood should have an outlet pipe, at least one foot in diameter, leading to the roof.

Refrigerator. A central refrigeration plant with pipes leading to an insulated enclosure in the diet kitchen is the ideal. In an institution accommodating less than one hundred patients, it is often necessary to substitute a separate box. If so, the best is an economy. In this case, an excellent refrigerator, covered inside and out with opaque glass was used. It was built into the cupboards, thus increasing its efficiency, and economizing space.

Sterilizer. An ordinary dishwasher is not suitable for a diet kitchen, as there is always the danger of infection, necessitating thorough sterilization of the dishes. A cylindrical receptacle three feet deep and two and one-half feet in diameter, having steam steel coils in the bottom, was selected, and gave good results. Wire dish baskets were used. These were suspended, by means of a heavy steel spring, from a lever attached to an arm projecting from the wall above. By means of this lever the baskets full of dishes could be lowered into the can of boiling water and allowed to remain as long as necessary. The chief advantage of this type of sterilizer is its simplicity, and the ease with which it is kept clean. There are many other good sterilizers on the market, but the matter of simplicity of construction should always be considered.

Tray-rack. A necessity in a diet kitchen is a rack to hold the trays, in order that dishes and food may be placed upon them. This article of furniture requires a good deal of space at best, and so should be planned as economically as possible. For sanitary reasons this rack should be of metal, but it may be constructed of iron piping, enameled white, having shelves made of small wooden rods, one inch in diameter. These fit over the iron pipe at intervals of four or five inches. These rods may easily be removed and washed.

Tray-lift. One of the most difficult problems that the dietitian must deal with, in connection with the food in a hospital, is the matter of keeping it hot until it reaches the patient's room. The food lift should be lined with asbestos and have a metal covering, if possible, and be provided with some means of supplying heat, as hot water, soapstones, or electricity. The heated food truck, while expensive, is of great service in keeping the food hot while it is being distributed to the various rooms and wards.

After these larger articles have been decided upon, and the dimensions taken, the next problem is to fit them into the space in such a way as to secure a proper relation to each other and the room itself. Then cupboards, work tables, and shelves may be planned. Shallow open shelves seem to be best for the storage of food materials and equipment constantly in use. Closed cupboards for kettles are improved by the use of heavy wire shelves such as are seen in refrigerators. Where heavy metal utensils are used, these shelves are more durable and more easily cleaned than wood. It is important that cupboards and shelves be planned for a definite purpose, otherwise many articles will not fit in where it would be most convenient to place them. Movable shelves held by grooves or metal pins are useful, as they may be adjusted to pieces of equipment of various heights.

Finish of woodwork. In this diet kitchen, the walls to a height of four feet and all working surfaces were covered with tile. The plaster was covered with several coats of washable white paint. Care should be taken that this is not put over a varnished surface, or it will soon craze, making cleaning difficult. The woodwork was covered with three coats of white paint and enameled with a glass-like finish that was easily washed, but required frequent attention. A well finished hardwood surface of natural color is certainly more efficient than the white, if not so attractive in appearance. All drawers and shelves were finished alike, inside and out, so that papers were not required.

Floor. Tiled floors while easily cleaned are very tiring. However, cork mats help to overcome this difficulty for workers. Linoleum is best from this standpoint, but if used, the best quality should be selected, carefully laid, and the surface kept well shellacked. A cement-like material, sometimes called German stone, may be substituted for either. Care should be taken to secure a good joining of the sanitary base and the floor covering. This is very difficult to do with linoleum.

Cooking utensils. In deciding upon the purchase of the smaller pieces of equipment it is helpful to list all the cooking processes likely to be carried on in the diet kitchen. Obviously, many things are unnecessary here because certain methods of preparing food are unsuitable for the sick. Examples of this type of equipment might be waffle irons and pie tins. It requires some experience in doing large quantity cooking before one can make a good selection of kettles, pans, and flat utensils.

A large coffee urn, having a pottery inset, is used in all diet kitchens. This should have two parts, one for the boiling water, and the other for the coffee. A very satisfactory and less expensive substitute for the hot water urn was found in a large block-tin pot with a faucet, placed on a single gas plate beside the coffee urn.

For a hospital having one hundred patients or more, it is necessary to install a large copper kettle surrounded by steam coils for the preparation of soups and vegetables. Also a large vegetable steamer is important.

A very useful piece of equipment is a large compartment steamer to be heated by gas. Rice and custard, important articles of food for the sick, can be cooked in this steamer very easily and successfully.

It is a difficult matter to decide upon kettles, as all materials are open to some objection. The ideal cooking utensil is, without doubt, the splendid cast nickel ware, which has been imported from Germany. This has no disadvantages whatever, except cost, which is not prohibitive for a large institution. It neither wears out, chips off, melts, bends, cracks, nor discolors. If this ware can be secured, the problem is solved for at least a generation. Copper, always so widely used by French chefs, has several serious objections: while its initial cost is perhaps two-thirds as much as nickel, it requires constant retinning; neither can it be used for the preparation of acid foods, and it requires a good deal of attention if kept in good condition. Enameled ware of any kind is absolutely impractical, especially in a hospital. At the request of a dealer, one kettle of the best type obtainable was used in this diet kitchen for the purpose of comparison. At the end of one month's

constant use it was so badly chipped as to be scarcely usable. After careful consideration, heavy cast aluminum was purchased, and has given excellent satisfaction. Considering price, durability, lightness, and appearance, aluminum is probably the best material for diet kitchen utensils now obtainable.

The selection of the right number of large, medium, and small utensils requires careful planning. It is necessary to provide eight or ten very small kettles holding one quart, or less, for special orders for one or two patients. Plenty of double boilers of various capacities, one large enough for the required amount of cereal, are doubly useful, as they may be used as separate kettles. Wherever possible, small ear-like handles are preferable to long ones. All lids should have handles.

Labor saving devices. Many labor saving devices are only suitable for small quantity cooking. One genuine saver of time and effort is the large sanitary potato masher and creamer. Nothing presents a more difficult problem than mashing or ricing a large quantity of potatoes. A large egg beater attached to the wall is useful. A small motor is of great service in turning the large ice-cream freezer. One small article found very useful was a revolving grater. It is scarcely necessary to refer to the usefulness of such articles as butter brushes and dish scrapers. It is necessary to have a good strong beef juice extractor, preferably of the type that is screwed down by a large handle.

Flat equipment. An automatic egg boiler is a useful piece of equipment. An inexpensive substitute was found in a French frying kettle and basket in which two dozen eggs could be coddled at one time.

It is well to purchase a good supply of spoons, paring knives, egg-whips, and other small articles easily lost, broken, or worn out. However, only the number necessary for the time being should be distributed, the rest being kept locked in a store room. Unfortunately it is difficult to purchase certain articles, such as bowl strainers, potato ricers, and food turners, which will stand hard wear, so these must be constantly replaced.

Storage of equipment. Most cooks find that it saves time to suspend many of these smaller articles from a rack near the stove or work table. In the diet kitchen referred to in this paper, open shelves at the side of the stove were used as space on which to lay such articles as egg beaters and food turners, while spoons, knives, and forks were kept near by in shallow drawers, divided into compartments. The arrangement of these articles in the most efficient manner is a matter requiring careful study.

A SUGGESTION IN REGARD TO THE PREPARATION AND USE OF CARAMEL

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AND

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It is not the purpose of this article to discourage the use of caramel or to make the public feel that another item of food is being tabooed. However, since considerable attention is being devoted to the furfural content of alcoholic beverages, and since furfural is one of the constituents formed in the dry distillation of sugar,[1] it seems desirable that we know something about this substance.

Furfural, furfurole or furfuraldehyde, C_4H_3O . CHO, is an aldehyde formed when pentoses are heated with dilute sulphuric acid or dilute hydrochloric acid. It yields an intense red dye when treated with aniline salts, and hence has always served as a convenient test for pentoses and pentosans. Many reagents have been suggested for estimating furfural both qualitatively and quantitatively. Recently Dox and Plaisance[2] have shown that thiobarbituric acid condenses readily with furfural in the presence of 12 per cent hydrochloric acid giving a voluminous precipitate, which can be filtered, dried and weighed. Since it is volatile with steam, furfural is given off when a substance containing it is heated with boiling water.

The fact is generally known that most sugars will yield small amounts of furfural or its derivatives, when they are treated with acids under various conditions,[3] but it does not seem to be generally known that furfural, possessing toxic properties, is formed also during the caramelization of sugar.

Brunton and Tunicliffe[4] found that when 0.5 gram furfural was fed to rabbits and cats death ensued. Smaller doses caused temporary

[1] V. Lippmann, *Chemie der Zuckerarten*, vol. ii, p. 1206; Sangrorgi, *Giorn. farm. Chim.*, 62, p. 256.

[2] Arthur W. Dox and G. P. Plaisance. A comparison of barbituric acid, thiobarbituric acid and malonylguanidine as quantitative precipitants for furfural. *Jour. Amer. Chem. Soc.*, 38, (1916) pp. 2154-2156.

[3] van Eckenstein and Blanksma, *Ber. d. deutsch. chem. Gesoll.*, 43, p. 2355; *Jour. Chem. Soc.*, 75, 423 and 79, pt. 1, p. 361, and pt. 3, p. 807.

[4] Brunton and Tunicliffe, London Lancet, 2 (1900), p. 1643.

paralysis of the voluntary muscles. One-tenth of a gram caused headache when fed to man.

While makers of caramel have worked on undisturbed, alcoholic beverages have been quite extensively analyzed for furfural, some of them having been found to contain as much as 0.03 gram per liter. That the "after effects" of whiskeys, wines and beers, have been attributed partly to furfural is indicated by the fact that ammonia, an antidote for furfural, is the basis of the "pick-me-ups" used by heavy drinkers to relieve the headache. It is very probable that furfural in these beverages comes partly from the caramel used as the artificial coloring.

EXPERIMENTAL

Analysis of vanillin in artificial vanilla extract repeatedly showed the presence of furfural, which further work proved to be due, no doubt, to the caramel used as coloring. It was then decided to test caramel made by the ordinary method to determine the amounts of furfural formed.

In each experiment 50 grams of sugar were caramelized in a small evaporating dish at the temperature indicated, dissolved in 250 cc. distilled water, and the furfural distilled out of this solution determined by the Dox and Plaisance method.[5] At least three experiments were made at each temperature. The following results were obtained:

Results of experiments

KIND OF SUGARS USED	TEMPERATURE	TIME HELD AT MAXIMUM TEMPERATURE	FURFURAL FROM 1 KG. SUGAR
	deg. C.	*min.*	*gm.*
Cane sugar	180	4	0.168
Cane sugar	185	4	0.198
Cane sugar	190	4	0.528
Cane sugar	193	4	0.564
Cane sugar	195	4	0.640
Cane sugar	200	4	0.944
Milk sugar	195	4	0.122
Glucose			Trace
Rice pudding			Trace
Peanut brittle (purchased at candy store)			Trace

Fructose, honey, and galactose were tested qualitatively and furfural was found in each case. The fact that commercial peanut brittle,

[5] Loc. cit.

which was tested, was probably made from glucose, is the reason why but a trace of furfural was found in it.

On the other hand an apple which had been allowed to bake too long producing a dark brown syrup in the bottom of the pan, gave a decided test for furfural. In this case cane (granulated) sugar was added to the apple as is ordinarily done in baking, and the caramel had resulted therefrom.

While cane sugar was found to give a larger yield of furfural on caramelization than any other sugar tested, it was also noted that boiling in an open pan with an equal amount of water for about ten minutes after caramelization was sufficient to entirely expel the furfural from this caramel.

The rice pudding made of $\frac{1}{3}$ cup rice, $\frac{1}{3}$ cup granulated sugar, and 4 cups milk showed but a trace of furfural; no doubt, because it had been cooked in an open pan in a slow oven for several hours.

DISCUSSION

The above results show without doubt that furfural is a product worthy of consideration in the making of caramel, for 1 kg. (2.2 lb.) of cane sugar yielded from 0.168 gram furfural (at 180°C.) to 0.944 gram furfural (at 200° C.), and but 0.1 gram of this aldehyde has been found sufficient to produce headache in man, while 0.5 gram fed to a rabbit or cat resulted in the death of the animal fed.

To be sure, one would never be able to eat 2.2 pounds of cane sugar made into caramel or peanut brittle, but it might be possible for one to consume one-fourth of this amount or a little more than one-half pound sugar made into peanut brittle. In this case, if the peanut brittle were a dark brittle, in fact any brittle cooked at 190°C. or above, one-fourth pound of sugar so made up would yield more than 0.1 gram furfural.

The experiments show that when boiled with water furfural is expelled. It is suggested, therefore, that when the product is cooked in the presence of water after caramelization, as in the making of cakes, frostings, and rice puddings, or for coloring when boiled with water, no precaution is necessary. Care should be exercised, however, to prevent caramelization in the baking of fruits, and in case such should happen it might be well to boil the caramelized syrup with an equal amount of water for ten or fifteen minutes before serving it. Also in the making of peanut brittle, it is advisable to cook at as low a tem-

perature as possible to obtain the desired result, thus making a light colored brittle, or better still, to use glucose or glucose syrup in place of cane sugar. This would have the additional advantage of reducing the cost of the product.

An objection raised to this, however, is that peanut brittle made with all glucose is not so sweet as that made from cane sugar. To overcome this objection experiments were tried using $\frac{1}{8}$ cane sugar, $\frac{1}{4}$ cane sugar, $\frac{1}{2}$ cane sugar, the rest being glucose in each case. The glucose was heated until it began to change color, then the cane sugar added, and the whole further heated, with constant stirring, until crisp when tried in cold water. At this stage, peanuts were added and the mass poured upon the bottom of a buttered pie tin and worked into shape with two case knives. Of the resultant products numbers III, IV, and V when tested were all free from furfural. Number II showed but a slight trace of furfural. For number I see experiments with cane sugar at 180°.

The following table gives a comparison of the cost, brittleness, and taste of the finished products. The taste was judged by five, only one of whom knew before tasting of any difference in preparation. The granulated sugar used cost $1 for 10 pounds, corn syrup (the dark variety) 60 cents for 10 pounds, and peanuts 20 cents a pound.

The amount of candy was less than $\frac{1}{2}$ pound in each case.

Note that as the glucose increases in amount the product becomes less sweet and the cost decreases. In connection with cost, since 1 cup of

Comparison of cost, brittleness, and taste

NO.	CORN SYRUP		GRANULATED SUGAR		PEANUTS		TOTAL COST	BRITTLENESS AND TASTE
	Amount	Cost	Amount	Cost	Amount	Cost		
I			½ cup	$0.022	¼ cup	$0.016	$0.038	Very brittle, good, sweet
II	¼ cup	$0.0104	¼ cup	0.011	¼ cup	0.016	0.0374	Very brittle, good, sweet
III	6 tbsp.	0.0156	2 tbsp.	0.0054	¼ cup	0.016	0.037	Very brittle, good, sweet. Less than II
IV	7 tbsp.	0.0182	1 tbsp.	0.0027	¼ cup	0.016	0.0369	Very brittle, not as sweet as III, II or I, but preferred by two of those tasting
V	¼ cup	0.0208			¼ cup	0.016	0.0368	Brittle but not sweet

glucose (average of four weights) was found to be 320 grams and 1 cup of granulated sugar (average of four weights) was 200 grams, it seems quite natural that the finished product should be 10 grams more in number V made of all corn syrup than in number I made of all cane sugar. If sold by the pound this would need to be taken into consideration in reckoning the cost.

THE VALUE OF TEXTILE CHEMISTRY TO THE HOME ECONOMICS STUDENT

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Although the value and importance of textile chemistry as a science is undisputed and the subject has long been an important part of the curricula of the few textile schools in this country, our colleges and universities have, as a rule, hesitated to give it a place either in their scientific or technical departments. This has been due largely to the fact that the textile industries of the country are so localized in a few of the southern and eastern states that our northern and western schools do not appreciate the value of textile work to their students.

However, of late years a new influence has arisen to shape and mold the curricula of our colleges and universities—an influence embodied in our modern home economics departments. Long ago the movement for training the homemaker passed the stage of elective courses in cooking and sewing, and, with her welfare ever in mind, began to develop, not only more extensive courses in home economics, but also courses in other departments of such scope and content as to best serve her. Many subjects in science and economics, hitherto unexplored by the majority of women, took on new significance in the light of their application to household affairs, and many new courses organized from related fields have made their appearance from time to time. Textile chemistry is one of the latest arrivals and should be welcomed. It has many important rôles to play.

First it has a distinct rôle as part of the general education of all home economics students. From the beginning of this work we believed

that a knowledge of sewing as well as cooking was necessary to the prospective homemaker, but for some reason when we began to strengthen these courses by introducing their allies in other departments, our partiality to the subject of foods was very marked. Elementary work in dietetics, experimental cookery, food chemistry, physiological chemistry, and other subjects, was started at an early period, and has become more extensive every year, while our only additions to domestic art, other than basketry and lace making, have been attempts to give courses in art and design. We have been very slow in learning that other than esthetic qualities are desired in a fabric or garment. We have been satisfied too long to make our purchases by the simple process of sitting comfortably at a counter, feeling the fabrics with a knowing air practised chiefly to impress the clerk, and buying the one best suited to our fancy or pocketbook. The average young woman today not only does not have enough definite information on the subject of textile materials to make her purchases wisely, but often cannot even formulate an intelligent opinion on modern textile problems.

Teachers of sewing have long been aware of this and have attempted to remedy the condition by introducing a few lectures on so-called textiles, or by organizing courses under this title. In such cases, the question has often arisen as to just what subject matter should be included in 'textiles' and what in 'textile chemistry.' The question is still an open one. However, most of us who have seen a trained sewing teacher attempt to discuss and illustrate chemical tests in a sewing room where chemicals and laboratory glassware are not found, will admit that even the simplest chemical tests should be included in courses in the chemistry departments where at least the materials are at hand, and those of us who are teaching textile chemistry are not nearly so troubled about keeping within the boundaries of our subject as we are about covering, in the short time usually allotted to us, even a comparatively small part of that extensive science.

On the other hand, courses for the large class of general students must necessarily be very broad in their scope if they are to be of any value. We can hope to give such students only the fundamentals of the subject and create that intelligent viewpoint which every educated woman should have concerning the materials with which she works.

The girl who specializes in domestic art presents another problem, however. She should have as inclusive and extensive knowledge of her chosen subject as it is possible to give her in the four years of college

work. She should be led to realize that it has its scientific as well as artistic side. This viewpoint of a subject which has so long had the name of art applied to it is indeed very new, but our present troubles with inferior materials and the subsequent agitation for pure textiles, the scarcity of dyestuffs, and even the advertisements of our textile manufacturers themselves, have all brought home to even the most artistic soul that a very artistic costume may not fulfill its function on account of inferior textiles or dyestuffs, and that art itself cannot come to its full realization or even exist without the crude building materials.

I almost hesitate to discuss the third rôle of textile chemistry in home economics work. It seems to bring out into the light a problem which we all admit exists and yet which we do not have the courage to face. Yes, we learned long ago that a homemaker must be trained; we have developed departments in our colleges to supply this training, and the popularity of the work is bringing an increasing number of girls to our schools; but we are just beginning to learn that even after acquiring this knowledge, the modern college woman has no guarantee that her workshop, a home, will be provided for her. In spite of all our discussions on remote and immediate causes and our many and varied suggested remedies for existing conditions, the fact still remains that many of our graduates do not become homemakers and must earn their livelihood. More and more of our students are realizing this also, and those of us who have seniors and juniors in our classes are sometimes overwhelmed and bewildered by the frequent repetitions of that ancient question, "What can I do?" And what can they do? What do they do? The majority teach, of course, whether they are naturally fitted for teaching or not, and often we are relieved to thus place a girl and get her settled. But we are coming to learn that this army of dissatisfied and naturally unfitted teachers is gradually weakening the fiber of home economics work throughout the country and bringing back to us a more complex problem than ever.

Then there is the girl who frankly says that she does not wish to teach and throws her question back again, "What can I do with this training which I have spent four years of time and money in acquiring?" We must answer the question. Even if we are developing homemakers as our primary object, the problem has grown up with our work and must be faced. We are beginning to do this to some extent. There is no need to enumerate the many lines into which our graduates are going. Dietitians, lunchroom managers, visiting housekeepers, leaders

of canning clubs, county agents, have all found their places in the last few years. There have been many entirely new lines of work opened up, and yet, as we review the list, we are struck by the fact that so few of these positions seem to have developed out of domestic art and so many out of domestic science. Can there be any connection between this and the fact that we developed the subjects allied to cooking first? Did we make new positions for women and open old ones to them because we first trained women for those places? Did we bring the demand by furnishing the supply? I am inclined to think that we did and to believe that we can do the same in domestic art.

We have considered too long that domestic art fits a student only to become a dressmaker—a profession in which considerable capital is necessary if one is to rise very high. There are other professions which she can enter, and we can help her, not only by enlarging our work in art and costume design to such an extent that she can enter advanced courses in special schools, but also by developing the scientific side of the subject. For example, women are by nature interested in color, and there is no good reason why properly trained women may not become dye chemists in the future. The only reason why they have not obtained openings in the past is because they were not trained to fill them. The door is already open a little way and many women are employed in other branches of industrial chemistry. Department store teaching and buying are other new occupations for women which are proving that a knowledge of textile chemistry is a very valuable asset, and we have only to look ahead a little and prophesy many lines in which the scientific side of domestic art will be of great value to our college girls.

THE HOMEMAKERS' COURSE AT KANSAS AGRICULTURAL COLLEGE

MARY PIERCE VAN ZILE

Dean of Division of Home Economics

The organization of the Homemakers' Course at the Kansas State Agricultural College in 1903 signified the recognition of the need for a more universal education for homemaking. The twentieth century

demands of the home manager an understanding of the sanitary requirements of the home, a knowledge of values, absolute and relative, of the articles used in the house, quick attention to details, good judgment in buying, and a ready adaptation of means to the end in view. The purpose of the Homemakers' Course at the Kansas State Agricultural College is to furnish this training. The training is both specific and general. While it emphasizes primarily the practical and material problems of housekeeping, it does not stop here. The young women are constantly reminded that life is not drudgery—that technical knowledge fails to include the full meaning of an education. They are taught ideals as well as actualities, and are brought to see that, while skilful labor gives dignity to life, grace, refinement, and self poise are the highest requisites for true service.

The teaching in this course is no less accurate than in the college course, but it is necessarily different. Given as it is to students without scientific training, the instruction must be more largely a presentation of facts, without as much of an elaboration of the underlying principles. The work is intensely practical, and the hundreds of young women who take this course go back to their homes with a broader view of life, and a knowledge and training that will enable them to meet their responsibilities. The course is six months in length and is offered each school year, beginning at the opening of the college year in September.

Young women between the ages of eighteen and twenty-one are admitted upon presentation of common-school diploma, grammar-school certificate, or high-school diploma, or upon passing an examination in the following subjects: reading, writing, spelling, arithmetic, grammar, geography, physiology, and United States history. Young women over twenty-one are admitted without examination.

REQUIRED SUBJECTS

COOKERY I. Fall term. Laboratory, eight hours.

A laboratory course. Stoves, stove construction, stove management, and fuels are the first topics considered, and this discussion is followed by experiments illustrating the effect of heat upon starch and proteins. The necessary elementary principles involved are then applied to the cooking of cereals, vegetables, beverages, breads, meats, soups, simple cake mixtures and puddings, and to the canning and preserving of fruits and vegetables.

SEWING. Fall term. Laboratory, eight hours.

This is a course in hand and machine sewing. The fundamental stitches are applied to simple articles and to patching and darning. Practice is given in the use of the sewing machine and in the drafting of patterns by the straight line system. Suitable materials and trimmings are discussed and a set of undergarments and a shirt waist are made. A note-book is required.

COLOR AND DESIGN. Fall term. Laboratory, six hours.

This is a course in simple designing and in studying color relations, with special reference to problems in the home.

COOKING II. Winter term. Laboratory, twelve hours.

The work of this course is divided into three parts. Four weeks are given to home cookery, four weeks to general care of the home, and the remaining four to the planning and the serving of meals.

HOME NURSING. Winter term. Class work, two hours.

This course includes the study of the sick room and its care and furnishing, and the duties of the home nurse in giving intelligent assistance to the physician, and in contributing to the comfort of the sick. This involves also the ability to recognize and report symptoms correctly; to relieve pain; to give baths; to change bedding; to disinfect; and to treat wounds, burns, and sprains, as well as to meet successfully other emergencies that may arise in the home.

DRESSMAKING. Winter term. Laboratory, eight hours.

This course includes practice in the following: Adaptation of patterns, cutting, fitting, and making a cloth dress and fancy waist. The student furnishes all her material.

FLORICULTURE. Winter term. Class work, two hours.

Lectures in the classroom are supplemented by practical exercises in the greenhouse, dealing with the propagation and culture of flowers. Soil requirements, the planting of seeds, transplanting, cultivation, the making of cuttings, the selection of varieties adapted to the purposes of window gardening, lawn planting and cutting, are discussed in the lectures. An opportunity to become acquainted with the species recommended, and with the operations necessary for their successful culture, is afforded in the laboratory practice.

HYGIENE AND SOCIAL PROBLEMS. Fall term. Class work, one hour.

This is a lecture course covering the subjects that have a direct bearing upon the health of a young woman student. It also includes a discussion of the social hygiene problems of young women.

NOTE.—Students in this course are requested to elect an additional subject, and it is hoped that many will remain for a full course during the spring term.

FOR THE HOMEMAKER

THE BRITISH HOME[1]

ARNOLD BENNETT

An evening at the Smith's. Mr. Smith returns to his home of an evening at 6.30 . . . (and) sits down to tea in the dining room. According to fashionable newspapers, tea as a square meal has quite expired in England. On six days a week, however, tea still constitutes the chief repast in about 99 per cent of English homes. . . . Mr. Smith gazes round at his home, his wife, and his children. He has been at work in the world for thirty-four years, and this spectacle is what he has to show for his labor. It is his reward. It is the supreme result. He hurries through his breakfast, and spends seven industrious hours at the works in order that he may have tea nicely with his own family in his own home of a night.

Well, the food is wholesome and sufficient, and they are all neat and honest, and healthy—except Mrs. Smith, whose health is not what it ought to be. Mr. Smith conceals his pride in his children, but the pride is there. Impossible that he should not be proud. He has the right to be proud. John is a personable young man, earning more and more every year. Mary is charming in her pleasant blouse, and Harry is getting enormous, and will soon be leaving school.

* * * * * *

This tea which is the daily blossoming time of the home that Mr. Smith and his wife have constructed with twenty-six years' continual effort, ought to be a very agreeable affair. Surely the materials for pleasure are present! But it does not seem to be a very agreeable meal. There is no regular conversation. Everybody has the air of being preoccupied with his own affairs. A long stretch of silence; then some chaffing or sardonic remark by one child to another; then another silence; then a monosyllable from Mr. Smith; then another silence.

[1] Selected by Carrie A. Lyford, United States Bureau of Education, from the essay on the British Home in Paris Nights, (1908). Published with the consent of Mr. Bennett.

No subject of wide interest is ever seriously argued at that table. No discussion is ever undertaken for the sake of discussion. It has never occurred to anyone named Smith that conversation in general is an art and may be a diverting pastime, and that conversation at table is a duty. Besides conversation is nourished on books, and books are rarer than teaspoons in that home. Further, at back of the excellent, honest, and clean mind of every Smith is the notion that politeness is something that one owes only to strangers.

When tea is over—and it is soon over—young John Smith silently departs to another home very like his own, in the next street but one.

In that other home there is a girl whom John sincerely considers to be the pearl of womanhood. In a few months, John inspired and aided by this pearl, will embark in business for himself as constructor of a home.

Mary Smith wanders silently and inconspicuously into the drawing room and caresses the piano in an expectant manner. John's views as to the identity of the pearl of womanhood are not shared by another young man who lives not very far off. This other young man has no doubt whatever that the pearl of womanhood is precisely Mary Smith (an idea that had never entered John's head); and he comes to see Mary every night with the permission of her parents. The pair are, in fact, engaged. Probably Mary opens the door for him, in which case they go straight into the drawing room. Young Henry has disappeared from human ken.

* * * * * *

Mr. Smith and his wife remain in the dining room, separated from each other by a newspaper, which Mr. Smith is ostensibly reading.

The parents. Well, you see them together. Mr. Smith has done earning money for the day, and Mrs. Smith has done spending it. They are at leisure to enjoy this home of theirs. This is what Mr. Smith passes seven hours a day at business for. This is what he got married for. This is what he wanted when he decided to take Mrs. Smith, if he could get her. These hours ought to be the flower of their joint life. How are these hours affected by the organization of the home?

I will tell you how Mrs. Smith is affected. Mrs. Smith is worried by it, and in addition she is conscious that her efforts are imperfectly appreciated, and her difficulties unrealized. As regards the directing and daily recreation of the home, Mr. Smith's attitude on this evening

by the domestic hearth is at best one of armed neutrality. His criticism is seldom other than destructive. Mr. Smith is a strange man. If he went to a lot of trouble to get a small holding under the Small Holdings Act, and then left the cultivation of the ground to another person not scientifically trained to agriculture he would be looked upon as a ninny. When a man takes up a hobby, he ought surely to be terrifically interested in it. What is Mr. Smith's home but his hobby?

* * * * * *

He has put Mrs. Smith in to manage it. He himself, once a quarter, discharges the complicated and delicate function of paying the rent. All the rest, the little matters, such as victualling and brightening—trifles, nothings!—he leaves to Mrs. Smith. He is not satisfied with Mrs. Smith's activities, and he does not disguise the fact. He is convinced that Mrs. Smith spends too much, and that she is not business-like. He is convinced that running a house is child's play compared to what he has to do. Now, as to Mrs. Smith being unbusiness-like, is Mr. Smith himself business-like? If he is, he greatly differs from his companions in the second class smoker. The average office and the average works are emphatically not run on business lines, except in theory. Daily experience proves this. The business-likeness of the average business man is a vast and hollow pretence.

Besides, who could expect Mrs. Smith to be business-like? She was never taught to be business-like. Mr. Smith was apprenticed, or indentured, to his vocation. But Mrs. Smith wasn't. Mrs. Smith has to feed a family, and doesn't know the principles of diet. She has to keep children in health and couldn't describe their organs to save her life. She has to make herself and the home agreeable to the eye, and knows nothing artistic about color or form.

I am an ardent advocate of Mrs. Smith. The marvel is not, that Mrs. Smith does so badly, but that she does so well. If women were not more conscientious than men in their duties, Mr. Smith's home would be more amateurish than it is and Mr. Smith's "moods" more frequent than they are. For Mrs. Smith is amateurish. Example: Mrs. Smith is bothered to death by the daily question, "What can we have for dinner?" She splits her head in two in order to avoid monotony. Mrs. Smith's *repertoire* consists probably of about 50 dishes, and if she could recall them all to her mind at once her task would be much simplified. But she can't think of them when she wants to think of them. Supposing that in Mrs. Smith's kitchen hung a card contain-

ing a list of all her dishes, she could run her eyes over it and choose instantly what dishes would suit that day's larder. Did you ever see such a list in Mrs. Smith's kitchen? No. The idea has not occurred to Mrs. Smith!

I say also that to spend money efficiently is quite as difficult as to earn it efficiently. Any fool can somehow earn a sovereign, but to get value for a sovereign in small purchases means skill and immense knowledge. Mr. Smith has never had the experience of the difficulty of spending money efficiently. Most of Mr. Smith's payments are fixed and mechanical. Mrs. Smith is a spender. Mr. Smith chiefly exercises his skill as a spender in his clothes and in tobacco. Look at the result. Any showy necktie shop and furiously advertised tobacco are capable of hoodwinking Mr. Smith.

* * * * * *

In further comparison of their respective "jobs" it has to be noted that Mrs. Smith's is rendered doubly difficult by the fact that she is always at close quarters with the caprices of human nature. Mrs. Smith is continually bumping up against human nature in various manifestations. The human butcher-boy may arrive late owing to marbles, and so the dinner must either be late or the meat undercooked; or Mr. Smith, through much smoking, may have lost his appetite, and veal out of Paradise wouldn't please him! Mrs. Smith's job is transcendently delicate.

In fine, though Mrs. Smith's job is perhaps not quite so difficult as she fancies it to be, it is more difficult than Mr. Smith fancies it to be. And if it is not as well done as she thinks, it is much better done than Mr. Smith thinks. But she will never persuade Mr. Smith that he is wrong until Mr. Smith condescends to know what he is talking about in the discussion of household matters. Mr. Smith's opportunities for criticism are far too ample; or, at any rate, he makes use of them unfairly, and not as a man of honor. Supposing that Mrs. Smith finished all her work at four o'clock and was free to walk into Mr. Smith's place of business and criticise there everything that did not please her! (It is true that she wouldn't know what she was talking about; but neither does Mr. Smith at home; at home Mr. Smith finds pride in not knowing what he is talking about.) Mr. Smith would have a bit of "a time" between four and six.

Mr. and Mrs. Smith are united by a genuine affection. But their secret attitudes on the subject of home management cause that affec-

tion by a constant slight friction to wear thin. It must be so. And it will be so until (a) Mr. Smith deigns to learn the business of his home; (b) Mr. Smith ceases to expect Mrs. Smith to perform miracles; (c) Mrs. Smith ceases to be an amateur in domestic economy, i.e., until domestic economy becomes the principal subject in the upper forms of the average girls' school.

The future. The cry is that the institution of the home is being undermined, and that, therefore, society is in a way of perishing, . . . And we are told: "It has come to this. This is the result of the craze for pleasure. Where is the home now?"

To which my reply would be that the home remains just about where it was. . . . Nevertheless, the home of the Smith's has a very real enemy and that enemy is not outside but inside. That enemy is Matilda. . . . She doesn't count, and yet she is the factor which, more than any other, will modify the home of the Smith's. . . . When you visit the Smith's the home seems always to be in smooth working order. But ask Mrs. Smith! Ask Mary! Get underneath the surface, and you will glimpse the terrible trouble that lies concealed. Mrs. Smith began with Matilda the First. Are you aware that this is Matilda the Fortieth, and that between Matilda the Fortieth and Matilda the Forty-first there will probably be an interregnum? Mrs. Smith simply cannot get Matildas. And when by happy chance she does get a Matilda, the misguided girl won't see the velvet with which the kitchen and the attic are carpeted.

Mrs. Smith says the time will come when the race of Matildas will have disappeared, and Mrs. Smith is right. But you say that the inconvenience brought about by the disappearance of Matilda will not exhaust the resources of civilization. The home will continue. But mechanical invention will have to be quickened in order to replace Matilda's red hands.

MENDING

Many traditions of the household have come to us from a past differing so essentially from the present, that it is worth while sometimes to examine our methods of work and see whether we are following certain usages blindly without present justification, or whether modern conditions call for some change in the adjustment of our time.

The following article from *The Youth's Companion* shows how one woman went to work to determine this question in regard to a common household occupation.

DOES IT PAY TO MEND?

Three years ago a woman who was addicted to overcareful and continual darnings and patchings of her clothes began to realize that instead of being thrifty she was probably wasting time. Like many other women, once she began to mend she never knew when to stop, for a misguided conscience nagged her into going on and on as long as there was a hole or a thin place in sight. The idea came to her of trying to copy the methods of the efficiency experts. She decided, therefore, to "standardize" her mending.

First, she made a list of the garments in common use that needed most frequent repairing; then she estimated the length of time each article could be worn without need of repair, and the average yearly cost. Following is a copy of the list, revised after three years' experience; but as no two women's experiences would furnish statistics that would be exactly alike, the list is given merely for illustration:

GARMENTS IN COMMON USE	ORIGINAL COST	LENGTH OF WEAR	AVERAGE YEARLY COST
		mos.	
Apron, kitchen overall	$ .60	18	$ .40
Apron, "tea"	.50	24	.25
Combination garment, muslin	.50	8	.75
Corsets	3.50	12	3.50
House dress, wash	5.00	12	5.00
Kimono	2.50	24	1.25
Nightgown, muslin	1.00	8	1.50
Nightgown, flannelette	1.50	8	2.25
Petticoat, muslin	1.00	12	1.00
Stockings, lisle or balbriggan	.35	1	4.20
Stockings, cashmere	.50	1	6.00
Union suit, summer	.50	6	1.00
Union suit, winter	2.00	6	4.00
Waist, lingerie	1.50	6	3.00

As a guide to mending, such a list will serve in the following way: You will see that the "life expectation," so to speak, of a kitchen apron is eighteen months, and its average yearly cost is forty cents. If by one hour of mending you can lengthen the life of the apron six months, you have spent the hour well, *provided* that you could not earn more during that time by doing something else. But if by an hour of mending you can lengthen the life of the apron only one month, even if you estimate your time as worth only six cents an hour, you are paying more for the apron than it cost in the first place.

It may sometimes be necessary to take that course, just as it is sometimes necessary to borrow money at a high rate of interest, but it is false economy to do it unless there is no other way.

THE SOY BEAN

The soy bean, already one of the most important crops of Asia, promises to take an important place in the agricultural industry of the United States. It is said that it may be utilized in a greater number and a greater variety of ways than almost any other agricultural product. Not only are the beans, and the oil expressed from them, available as food, but soy bean oil is used for making paints, varnishes, soaps, rubber substitutes, linoleum, waterproof goods, and lubricants, besides its use in the Orient for lighting and other purposes.

In Japan the soy bean is one of the principal ingredients in the manufacture of shoyu (soy sauce), miso (bean cheese), tofu (bean curd), and natto (steamed beans). The beans are eaten also as a vegetable and in soups; sometimes they are picked green, boiled, and served cold with soy sauce, and sometimes as a salad. A "vegetable milk" is also produced from the soy bean, not only forming the basis for the manufacture of the different kinds of vegetable cheese, but used fresh, while a form of condensed milk is also made from it. All of these food stuffs are used daily in Japanese homes, and for the poorer classes are the principal source of protein.

Soy bean oil resembles that of cotton seed in many ways. The meal remaining after the oil is extracted from the beans has become important during the last few years as a food of low starch content, and so adapted to the use of diabetic patients.

Soy bean flour enters as a constituent into many o the so-called diabetic breads, biscuits, and crackers manufactured as food specialties. The flour or meal may be used successfully in the household as a constituent of muffins, bread, and biscuits in much the way in which corn meal is used.

An artificial milk like that manufactured in the Orient has been produced in small quantities in the United States, and recently a factory has been equipped to make this product. Such milk may be used for cooking in the household, and by bakers, confectioners, and chocolate manufacturers. Such products must, of course, be properly labeled.

The soy bean has also been utilized as a substitute for the coffee bean. When roasted and prepared, it makes an excellent substitute for coffee.

THE ADVANCE IN FOOD PRICES

Retail food prices in the United States are said to have advanced 19 per cent in the year ending with January 15, as shown in statistics prepared by the bureau of labor. The increase in four years was 30 per cent.

Every food staple except coffee and tea advanced during the year. Onions and potatoes led with increases of more than 50 per cent. Some of the advances were:

Kind of food	*Per cent*	*Kind of food*	*Per cent*
Sirloin steak	7	Cheese	27
Round steak	8	Milk	11
Rib roast	8	Bread	13
Chuck roast	7	Flour	38
Pork chops	10	Cornmeal	23
Bacon	8	Potatoes	57
Ham	4	Onions	58
Lard	22	Beans	39
Hens	16	Prunes	5
Salmon	7	Raisins	16
Eggs	32	Sugar	16
Butter	18		

EDITORIAL

The Food Situation. The Secretary of Agriculture, in a statement issued March 3, says:

There is nothing in the food situation of the country which justifies hysterical thinking or action.

The prices of food stuffs are high. A full and satisfactory explanation of prevailing prices is not possible on the basis of existing knowledge. It is only recently that agencies have been created in the country to study food distribution, and we have not all the necessary facts to enable us to arrive at the truth. Where the food supply is located, who owns it, what may be the difficulties of securing it, whether the local market conditions are due to car shortage, whether there is artificial manipulation or control, no one can state with certainty.

He emphasizes the necessity of learning the facts, not only because of present conditions "but also because they are prerequisite for the working out of a permanent, just and economical system of marketing."

He also emphasizes the necessity of limiting waste.

For partial immediate relief, every individual and community should consider earnestly the matter of food conservation and the limitation of waste. As a nation we seem to have a disdain of economizing. In many homes there is a strong feeling that it is "only decent" to provide more food than will be eaten and that it is demeaning to reckon closely. The experts of the Department of Agriculture report that the dietary studies made by them point to an annual food waste of about $700,000,000.

The food waste in the household results in large measure from bad preparation and bad cooking, from improper care and handling, and, in well-to-do families, from serving an undue number of courses and an overabundant supply, and failing to save and utilize the food not consumed. As an instance of improper handling, it is discovered that in the preparation of potatoes 20 per cent of the edible portion in many cases is discarded.

Secretary Houston's statement that "the waste in families of very limited means is slight" unfortunately seems not to be wholly true. One can have little contact with the dependent poor without realizing

that in these families at least the proportion of waste in relation to expenditure is as great or greater than in the majority of well-to-do families.

Have Schools of Home Economics begun to realize their responsibility in this matter? They are preparing the public school teacher who influences large numbers of homes through the children; they are training girls who are going into their own homes to put in practice not so much precepts given them as the actual usage of the school; they are sending extension workers to rural families, and training visiting housekeepers; they are providing hospital dietitians and lunch room managers. If Europe up to this time has dealt with the food situation "more largely through conservation of foods, regulation of the diet, limitation of courses and quantities, and prevention of waste, rather than through direct control of production or regulation of distribution under any sort of dictatorship," does not the solution in America lie to a considerable extent in the better administration of the homes and the practical efficiency of those who are influencing the ideals of these homes?

To undertake a Campaign for Conservation might be the best work the American Home Economics Association could do.

Baby Week. Last year began the nation wide observance of "Baby Week," a popular educational program instituted by the coöperation of the Children's Bureau and the General Federation of Women's Clubs. Chicago, New York, and a few other cities had already held such a celebration, but in 1916, 2000 and more communities scattered over every state in the Union observed "Baby Week."

The report of the Chief of the Children's Bureau states that the success of Baby Week depends upon securing the interest of many people, public officials, committees of private citizens, teachers, librarians, business men, fathers, mothers, big brothers and sisters. Public meetings, exhibits, conferences with parents, including examinations of well babies, flags distributed by Boy Scouts or other organizations to every house where there is a baby; processions, plays, tableaus, school children's essays—these are some of the ways whereby the interest was aroused in the more than 2000 localities which gave a few days each for studying the needs of their babies and for asking themselves whether they were giving every baby his fair chance, or what common action was needed in order to protect all their youngest and most helpless citizens.

It is suggested that Baby Week for 1917 be observed from the first to the sixth of May.

One of the suggestions made is that the scope be enlarged to include all children under school age. As one mother says, "It requires only twelve months for a baby to become one year old and no longer subject to the hazards of 'infant mortality,' but there are still many risks for him to encounter; he is still absolutely helpless, although increasingly charming, and his parents are as eager to keep him well and happy, as desirous of sound advice, as they were last year. Open out the 1917 Baby Week to include children still at home with their mothers."

It is to be remembered also that well cared for, healthy mothers are necessary for the health and happiness of their babies, and that the importance of protecting the mother must be given a prominent place in the educational work of the campaign.

A bulletin of suggestions for Baby Week, 1917, may be obtained from the Children's Bureau, Washington, D. C., as well as a full report of the 1916 observance.

The New Vocational Bill. President Wilson signed the Smith-Hughes bill on February 23. The bill, after passing the Senate in July, 1916, and the House in January, 1917, was adjusted by a conference committee. In its final form it calls for an administration board consisting of the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labor, the Commissioner of Education, and three others, one representing the interests of commerce and manufacture, one representing agricultural interests, and one the interests of labor.

The first appropriation will be available July 1, 1917. The amount appropriated for the first year is $1,700,000 and a greater fund is authorized for each succeeding year until an annual total of $7,200,000 is reached.

Provision is made for appropriation for salaries for teachers of vocational home economics, and for schools for the training of such teachers. Just how this will be interpreted so far as our own work is concerned, and what proportion of the money will be allowed for such work can be determined only after the full commission is appointed.

The Association at Kansas City passed the following resolution:

WHEREAS, the passage of the Smith-Hughes Act granting Federal Aid for Vocational Education has made available a considerable sum of money, part of which will be used for vocational education in home economics; be it

Resolved, That the American Home Economics Association in session with the Division of Superintendence of the National Education Association offers its services in an advisory capacity to the Board appointed to administer the

funds available under the act granting Federal Aid for Vocational Education, in so far as they are applied to vocational training in home economics.

This has been sent to the Secretaries of Agriculture, Commerce, and Labor, and to the Commissioner of Education, and has brought the promise that the resolution shall be brought to the attention of the Federal Board for Vocational Education as soon as it is organized.

COMMENT AND DISCUSSION

A correspondent writes:

May I make a suggestion for the JOURNAL? It is quite difficult as you know to secure the right teachers for summer school work in home economics, and yet there must be a number of excellent instructors and assistant professors as well as heads of departments who are available for this work, and also a number who would like to teach in a summer school away from their own institution. Is this the work of an agency or could it be handled informally through your office? For instance, if we needed an instructor and I knew that some one in another institution were available I would need only to write to the head of the department to discuss the suitability of her assistant for the place.

The JOURNAL office is glad to undertake to put heads of departments and those desiring summer work in touch with one another so far as this is possible. If those desiring such positions will write to the office, giving a brief account of themselves and naming the institutions with which they are connected, their letters will be forwarded to any who write for information in regard to instructors.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

Feeding the Family. By MRS. MARY SWARTZ ROSE. New York: The Macmillan Company, 1916, pp. 450. $2.10. By mail of the Journal $2.20.

This book represents a valuable and highly successful endeavor to render into popular language and into practical precept present day knowledge of the science of nutrition. In the preface the author points out that, while many things, such as sleep, fresh air and exercise, contribute to health, the foremost consideration is food. The purpose of the volume is to provide a guide-book to good nutrition for a twentieth century family, so that housewives, who prepare something like a thousand meals a year for those dependent on them, may enjoy the service of scientific knowledge in the fulfillment of their tasks.

The cost of various foods, as measured in terms of their caloric content, is strongly emphasized throughout the book, but the method of obtaining proper quantities of protein and salts is also described. Thus, it is pointed out that milk at nine cents a quart furnishes protein more cheaply than round steak at twenty-eight cents a pound. It is also shown how milk affords the cheapest known source of lime which is used for the development and maintenance of the bones.

Adequate diets are suggested for all ages, in health and disease, and for the slender purse as well as for the more opulent. Thus, menus are given which will furnish a family of six with 14,000 calories a day at a cost of $1.40 and this may be compared with the dietary containing the same food value but costing $2.50 daily. The one represents an annual cost of $900; the other, one of $500. Surely, such knowledge is of value if it can only be brought to those in need of it. The reduction in cost is effected by omitting eggs, substituting cookies for lady fingers, dried beef for chicken, dried fruits for fresh fruits, using the cheaper forms of fish instead of meat, laying emphasis especially upon cereals and vegetables, and yet allowing three quarts of milk especially for the children.

Knowledge of food values is now available as never before. A book like that of Mrs. Rose helps to make it of service to mankind.

GRAHAM LUSK.

Clothing for Women. By LAURA I. BALDT. Philadelphia: J. B. Lippincott & Co., 1916, pp. 454. $2. By mail of the Journal, $2.16.

Miss Baldt has given to the teachers of home economics and vocational subjects a book long needed and eagerly looked for. While written primarily with college classes in view it can be adapted easily to the use of students in the high school and to women in the home. It contains scientific, economic, and artistic facts concerning the construction of garments; technical instruction, and working designs for drafting, cutting, fitting, and finishing women's outer and under clothing; wholesome advice to the buyer of textiles as to the wise use of her money; and information to the teacher. The directions for designing and constructing clothing are practical and easily followed.

On account of the rapid changes in fashion, such a book is difficult to write in a way so that it will continue to be of value. Miss Baldt has, however, selected permanent principles on which to base her

instruction. She suggests ways of changing patterns, in order to adapt old to new styles, which tend to free the student from hard and fast rules of garment construction. Drafting and pattern making are too often taught in a dull, mechanical way, making them almost useless in education. Miss Baldt, however, seeks to develop thought concerning the essential constructive points of garments and the way to cover the body attractively. She shows that drafting is but a step toward a keener appreciation of line, freedom in altering patterns, and a better designing of garments.

The subject of pattern making is approached by means of a simple shirt-waist, discussed at first in its completed state, followed by the taking of measures, drafting the garment, and then testing the results. The author then shows how other articles of clothing can be developed from this pattern, and also how to copy illustrations or judge design. She decries waste of time in useless demonstration on the part of the teacher, and suggests for all pupils ample experimentation in materials until they learn to express themselves adequately. She stresses the part of her subject where the need for information is greatest and gives the sort of information which everyone wants and does not know where to find.

The book is divided into three sections: The first deals with the selection of clothing and discusses such practical matters as what to buy, what clothing should signify, planning a wardrobe, the choice of ready-to-wear clothing, textile suggestions, and clothing budgets.

The second section is on clothing design. It considers color, historic dress and ornament, principles on which to plan clothing, the use of commercial patterns, and simple problems of clothing design. The art teacher as well as the dress making teacher will be helped by the suggestions.

Part three is on the construction of clothing, and treats of the equipment and tools needed in the making of garments and how to use them; the stitches and constructive processes; the principles of making suitable textiles to use in outer and under garments; trimmings and findings; and descriptive ideas on decoration and self-trimming.

The final chapter shows home workers, dressmakers, and teachers how to use the book to the greatest advantage.

Numerous clear illustrations, well-chosen book lists and suggestive questions add to the value of the book.

Miss Baldt believes all women should clothe themselves wisely and would have each know how to choose what is becoming yet according to the purse.

MARY SCHENCK WOOLMAN.

How to Live. By IRVING FISHER and EUGENE LYMAN FISK, Ed. 3. New York: Funk & Wagnalls Co., 1916, pp. 345. $1. By mail of the Journal, $1.10.

Probably there will be no single exception to general popular interest in the purpose of this book. The authors state this purpose as follows: To spread knowledge of individual hygiene—to extend human life, not only as to length, but also, if we may so express it, as to breadth and depth.

The various chapters deal with such subjects as Air, Food, Poisons, Activity, Hygiene in General, with supplementary notes on Alcohol, Tobacco, Colds, Degenerative Diseases, and Eugenics.

The chapter on air treats of housing, clothing, outdoor living, and deep breathing. The advice is, in the main, good, although there is no strikingly new point made. The remarks about drafts are capable of misconstruction. "A gentle draft is as a matter of fact one of the best friends which the seeker after health can have." Manifestly the authors mean that fresh air is such a friend, and that the mere stirring of air is in itself an advantage. The section on clothing gives some good advice. The section on outdoor living and that on deep breathing fall into the same category.

The chapter on food is an illustration of the well known difficulty experienced

by anyone who strives to present scientific facts in a popular form. Frankly, it seems to the writer that this chapter has little practical value. The statements made are in many cases so general as to be somewhat misleading. The statement that "ten calories of protein out of every hundred calories of food is not too small an allowance," does not, it seems to us, tell enough of the story. Again, the authors take too little account of previous habits and conditions. Anyone who has worked for years among families with generations of underfeeding back of them, will see the necessity for great care in setting food standards. The discussion of a possible excess of protein in the diet seems to us to stop short of practical and valuable conclusions. Taken all in all, the person with no knowledge of dietetics would get very hazy ideas on the subject of formulating a healthful diet.

The chapter on poisons deals with constipation and the following statement is made: "Free water drinking at meals may prove constipating." One questions the authority back of this statement. The chapter also deals with cleanliness, exercise, and care of the teeth.

The chapter on activity gives some good advice; that on hygeine in general gives fifteen rules for keeping well.

The notes on alcohol are valuable as is any discussion giving popular education on the dangers of alcohol. Whatever one may think of the value of restricted use of alcohol, it would seem to be the wiser part to give the public all possible knowledge of the harm attending its unrestricted use.

WINIFRED STUART GIBBS.

Commercial Publications.

From time to time commercial publications come into our hands that contain facts, not always easily available, that are useful to the teacher of home economics, as well as the housekeeper. One such publication is issued by the Lovell Mfg. Co., of Erie, Pa., on "Clothes Wringers and Cold Process Mangles." It gives different types of wringers with details of their construction and illustrations of many different types. It may be obtained by writing to the company.

A second pamphlet is called "A Century of Sugar Refining in the United States," issued by the American Sugar Refining Co., Brooklyn, N. Y. It gives a brief history of the refining industry, with some statements in regard to the manufacturing process, and has some fine illustrations.

BOOKS RECEIVED

Costume Design and Home Planning. By Estelle Peel Izor, illustrated by Katherine P. Brown and Rachel T. Dixon. Boston: Atkinson, Mentzer and Company, 1916, pp. 210. $.90. By mail of the Journal, $.98.

A Course in House Planning and Furnishing. By Charlotte Wait Calkins. Chicago: Scott, Foresman and Company, 1916, pp. 79. Paper, $.60. By mail of the Journal, $.68.

Food Study. (A text-book in Home Economics for high schools). By Mabel Thacher Wellman. Boston: Little, Brown and Company, 1917, pp. 324. $1.00. By mail of the Journal, $1.09.

The Home and the Family. By Helen Kinne and Anna M. Cooley. New York: Macmillan Company, 1917, pp. 292. $.80. By mail of the Journal, $.90. (The Home-Making Series.)

A Layman's Handbook of Medicine with Special Reference to Social Workers. By Richard C. Cabot. Boston: Houghton, Mifflin and Company, 1916, pp. 524. $2.00. By mail of the Journal, $2.14.

PAMPHLETS RECEIVED

The following pamphlets may be obtained from the Supt. of Documents, Government Printing Office, Washington, D. C.: or from the department from which they are issued.

Digestibility of Vegetable Fats. By C. F. Langworthy and A. D. Holmes. U. S. Dept. of Agr., Bul. No. 505, Feb. 13, 1917, pp. 20.

Eggs and Their Value as Food. By C. F. Langworthy, U. S. Dept. of Agr. Bul. No. 471. Jan. 31, 1917, pp. 30.

Fats and Their Economical Use in the Home. By A. D. Holmes and H. L. Lang. U. S. Dept. of Agr., Bul. No. 469, Dec. 15, 1916, pp. 27.

The Food Value and Uses of Poultry. By Helen W. Atwater. U. S. Dept. of Agr., Bul. No. 467, Dec. 29, 1916, pp. 29.

Home Canning Instructions. (Canning of Soups and Meats.) By George E. Farrell. U. S. Dept. of Agr., Office of Extension Work, North and West, Dec. 22, 1916, pp. 8.

Homemade Fireless Cookers and Their Use. Farmer's Bulletin No. 771, U. S. Dept. of Agr., Dec. 1916, pp. 16.

Potatoes, Sweet Potatoes, and Other Starchy Roots as Food. By C. F. Langworthy. U. S. Dept. of Agr., Bul. No. 468, Jan. 17, 1917, pp. 28.

Studies of the Digestibility of the Grain Sorghums. By C. F. Langworthy and A. D. Holmes. U. S. Dept. of Agr., Bul. No. 470, Dec. 22, 1916, pp. 30.

Value to Farm Families of Food, Fuel, and Use of House. By W. C. Funk. U. S. Dept. of Agr., Bul. No. 410, Nov. 11, 1916, pp. 36.

Fourth Annual Report of Chief Children's Bureau, for fiscal year ended June 30, 1916. Dept. of Labor, pp. 27.

Some Facts Concerning Manual Arts and Homemaking Subjects in 156 Cities. By Joseph C. Park and Charles L. Harlan. Dept. of The Interior, Bureau of Education, Bul., 1916, No. 32, pp. 25.

The Physical Care of Rural School Children. By Taliaferro Clark. U. S. Pub. Health Service, Reprint No. 366, Oct. 6, 1916, pp. 8.

Relationship of Milk Supplies to Typhoid Fever. By W. H. Frost. U. S. Pub. Health Service, Reprint No. 380, Dec. 1, 1916, pp. 14.

The following pamphlets are issued by the publishers listed.

Colony Care of the Feeble-Minded. Revised and printed by the Committee on Provision for the Feeble-Minded, 702 Empire Bldg., Philadelphia, Pa.

House Heating. Bul. of Missouri State Board of Agriculture, vol. xlv, No. 6, June 1916, pp. 24, Secretary of State Board of Agriculture, 112–124 Agriculture Bldg, Columbia, Mo.

The Use of Lye in the Preparation of Food. By K. G. Bitting. Research Laboratory, National Canners Association, Washington, D. C., Jan. 1917.

Nursing as a Vocation for Women. By Katherine M. Olmstead. Exten. Div., Univ. of Wis., Madison, Wis., Bul. Serial No. 814, Nov. 1916, pp. 19, price 10 cents.

The Oceans: Our Future Pastures. By Zonia Baber. Reprint from the *Scientific Monthly,* Sept., 1916, pp. 5 (pp. 258–262.)

Report of the Committee on Dietary Food Supplies in the New York State Hospitals. Reprint from *The State Hospital Quarterly,* Nov., 1916. Utica, N. Y., pp. 14.

The Teaching of Thrift in the Public Schools. By H. R. Bonner and M. P. Shawkey, Charleston, West Va., 1917, pp. 54. (Contains a bibliography and songs.)

BIBLIOGRAPHY OF HOME ECONOMICS

PERIODICAL LITERATURE

Contributions to the Bibliography are welcomed. Please send material to the JOURNAL.

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NEWS FROM THE FIELD

The Federated Association of Applied Arts and Sciences, Southern Section, Cal. In 1915, when the Southern California Institute was held at San Diego, a banquet was given at Hotel Grant for teachers especially interested in vocational branches. At a subsequent meeting, plans were discussed for a federated association, and, during the months which followed, a constitution was framed and adopted by the Home Economics, Agricultural, and Manual Arts Associations. As a result of this organization an unusually helpful and interesting program was presented in 1916.

December 19, a dinner was given at Hotel Clark, in honor of Dr. Frank Mitchell Leavitt, Professor of Industrial Education at the University of Chicago. Dr. Frank H. Ball, President of the Santa Barbara State Normal School, Dr. E. R. Snyder, State Commissioner of Vocational Education, and Ella V. Dobbs, of Columbia University, Mo., were also guests of the Association. Miss Ada Blanchard, President of the Federated Association, acted as chairman and introduced the speakers.

Dr. Leavitt spoke on the reorganization of courses of study for the first two years of high school.

Dr. Snyder spoke on the great need of increased vocational training, on the Smith-Hughes Bill and what it would mean to California in financially aiding vocational education. He also discussed briefly the certification of special teachers in California and the urgent need of a radical change in the laws governing the granting of high school certificates, since high school teachers are really all special teachers.

Miss Dobbs told of the work of the Federated Association of Applied Arts and Sciences in Missouri, especially dwelling upon the benefit derived from the close correlation of the fine arts with domestic art and manual training.

At the behest of Dr. Frank Ball, H. E. Miles of Racine, Wisconsin, who happened to be in the city, gave an excellent talk on the vocational training in the country, and the need for the socialization of education. Mr. Miles is a prominent manufacturer, who for years has devoted a great deal of his time to industrial education. He is chairman of the Industrial Education Committee of the National Manufacturers Association and president of the Wisconsin Industrial Commission.

The section meetings on December 22 were of unusual interest.

Miss Letita Weer, of the Los Angeles State Normal School, addressed the Home Economics Section, urging the immediate need of a more thoroughly standardized course of study in home economics for high school classes. This is especially necessary for students who wish to use their high school work as a basis for normal or college training, but it would have a tendency to strengthen all of the work.

Dean Hunt of the College of Agriculture of Univ. of California gave a very instructive account of the Agricultural College, the correspondence courses of the college, the work and standards of the farm school at Davis. He also discussed the rapid advance of agricultural work in the high school, and the training necessary for teaching that work.

At a joint session of the sections Dr. Leavitt spoke on vocational training and Mr. Donoho told of the wonderful work. accomplished by the Municipal Employment Bureau in the city and also in Southern California. The organization has achieved such success, both from the standpoint of employers and employees, that it is now a state, as well as a municipal, organization.

One of the greatest needs of the bureau at the present time is a well trained vocational director to whom all juvenile applicants may be referred. In this age of specialization, training is essential if young people are not to enter "blind alley" occupations, and the close coöperation of this bureau with our public schools would be of inestimable benefit to our boys and girls. The annual report of the Public Employment Bureau of Los Angeles District may be obtained, on request, from Mr. Harry C. Donoho.

At the close of the meeting an informal reception to speakers and guests was held and a picnic lunch served. The afternoon was devoted to a study of the exhibits at the Park and trips to manufacturing plants.

The National Child Labor Committee has been making a comprehensive study of child labor in agriculture—an almost untouched, yet urgent, phase of the problem. They are also investigating and regulating the work of young children in street trades, which are not only morally dangerous, but are industrial blind-alleys as well. They hope to make a systematic study of the relation of child labor to juvenile delinquency, while continuing to work for better compulsory education, vocational training, and mothers' pension laws.

The Child Labor Committee believes that the Keating-Owen Bill, passed by Congress in August, marks the greatest step yet taken in child labor reform. That law, when in force after September, 1917, will remedy the worst conditions persisting in manufacture and will reach 150,000 boys and girls.

The Vocational Education Association of the Middle West held its third annual convention at the Auditorium Hotel, Chicago, January 18–20.

The special object of this association is "the discussion of problems relating to industrial, agricultural, and commercial education in their various phases" that all may become familiar with the different solutions proposed for "industrial preparedness."

One session was devoted especially to Work for Women; Mrs. Harlan W. Cooley, President, of the Chicago Women's Club, presided, and addresses were made by Florence M. Marshall, Principal Manhattan School of Trades for Girls, on Training Girls for Wage-Earning Occupations; Miss Abby Marlatt, University of Wisconsin, on Efficiency in the Home; Prof. David Snedden, Columbia University, on the Double Problem of Vocational Education for Women. Miss Isabel Bevier, of the University of Illinois, and Miss Ida M. Cook, Supervisor Household Arts, Chicago Public Schools, led the discussion.

Other sessions discussed Vocational Education from the standpoint of organized labor; the Principles of Agricultural and Industrial Legislation, and Vocational Efficiency.

Ellen H. Richards Memorial Meeting. The home economics department of the Ohio Mechanics Institute, Cincinnati, Ohio, celebrated Richards Day with an appropriate program.

Mrs. Gail Cornelius, dean of the department, sketched Mrs. Richard's life. Miss Hutzler told of the Lake Placid Conference of 1899, which marked the beginning of an organized home economics movement in this country. Miss Riggs read a paper on The Art of Homemaking, showing that science will make woman more efficient as housekeeper, as homemaker, and as mother.

Miss Tischler, in charge of the work in domestic art, spoke about Mrs. Richards in relation to clothing.

A living library of Mrs. Richards' books was the contribution of the students in the home economics department. They gave a series of short talks.

The celebration ended with a social hour, with tea and tea-cakes made and served by the students.

In connection with the meeting of the American Association of Agricultural Colleges and Experiment Stations, held in Washington in November, 1916, there was a conference of home economics teachers employed in Land Grant Colleges, presided over by Mrs. Henrietta W. Calvin of the Bureau of Education.

Mrs. Calvin briefly reviewed the meeting of this same group of women in Berkeley, California, in August, 1915, which, as well as the meeting in Washington, was convened in response to a call issued by the Commissioner of Education. At the meeting in Berkeley a committee of three was appointed to present to the executive council of the American Association of Agricultural Colleges and Experiment Stations a request that there be created a Division of Home Economics in the College Section of the above-named association.

The committee, consisting of Miss Berry of the University of Minnesota, Mrs. Morgan of the University of California, and Miss MacKay of the Iowa State Agricultural College, reported, through its chairman, Miss Berry, favorable action and the authorization of a Division of Home Economics. Miss Berry, of Minnesota, was unanimously elected chairman and Miss Helen Knowlton, of New Hampshire, recording secretary of this Home Economics Division of the College Section of the American Association of Agricultural Colleges and Experiment Stations.

The meeting was addressed by Dr. Claxton, Commissioner of Education, who emphasized the peculiar kind of obligation to the people that belongs to instructors and directors of work in home economics.

Miss Stanley of the University of Missouri was the first speaker of the day and discussed "The content of special methods courses for students preparing to teach home economics." Miss Stanley's outline will be given in the next number of the JOURNAL. Miss White of Ohio State presented an outline that has been found effective in Ohio, and Miss Loomis, continuing the discussion of the same paper explained the work in the University of Nebraska.

The topic "Adjustment of college requirements" was discussed by Miss Colwell of West Virginia, Miss Turner, Mr. Porter, Miss Haggard of Kansas, Miss White of Michigan, and others.

The discussion relating to basis for increase of home economics salaries was opened by Miss Marlatt of Wisconsin. She stated that it should be dependent upon teaching power, publication and research, and placed especial stress on teaching power. Miss Bevier also emphasized the need of teaching power in the individual, stating that "the teacher must have a philosophy of life to hold herself and others steady. She must be able to make some contribution to the life of the student and she must be able to do good team work. She must be one who will grow in her efficiency."

In the discussion of the basis of the allotment of teachers' time, Miss White of Michigan said, "There must be an adjustment between the amount of work which is a burden and the amount of work which is an inspiration. The teacher should feel inspired to do outside work for herself." Miss White thought the schedule should be so arranged that the freshmen and sophomores could come in contact with the strongest teachers in the department. Some thought that the number of pupils taught instead of the number of actual hours spent in the classroom should be considered.

Miss MacKay reported a wide variation in teaching hours in Iowa State College.

In considering the preparation for extension teachers and women county agents, Miss Rose of Cornell University advised requirements similar to those made for men county agents: graduation from a four years' home economics course, five years practical experience, and one year of graduate study.

The conference agreed that women extension workers were often given too many hours of work per day and that it would be well to send two women into each field to share in the work done.

No other conference of this kind will be called, since a yearly meeting of those interested in these subjects will be held in connection with the annual meeting of the A. A. A. C. and E. S.

THE MEETING AT KANSAS CITY

The meeting of the American Home Economics Association at Kansas City in connection with the Department of Superintendence of the N. E. A. was as great a success as the one held last year at Detroit. That it is desirable to hold such sessions in connection with this N. E. A. meeting is well proved.

There were nearly three hundred present both morning and afternoon. The hall at the Y. W. C. A. which was given over to us was filled to overflowing. The program as announced was carried out with few changes. The most important addition was a short speech by Miss Alice Ravenhill, whose unexpected presence was most welcome. As many of the papers as possible will be given in later numbers of the Journal.

In addition to the meetings many other opportunities for becoming acquainted and making ourselves known were offered.

The JOURNAL and Association were given a prominent position near the registration desk at Headquarters and many superintendents of schools and others gained here their first knowledge of our work.

On Wednesday several of the home economics visitors attended the meeting of the Home Economics Section of the Woman's Club and made brief addresses.

On Thursday a motor bus was provided for transporting home economics visitors to several schools and school lunch rooms. In the afternoon of the same day there was an automobile drive through the city and afterwards a tea at the Technical High School, given by the Kansas City Home Economics Association. On Friday those attending the luncheon that was announced at the Y. W. C. A. not only filled the space available but an overflow of an equal number was taken care of at the Kupper Hotel.

Brief Notes. The next convention of the American Chemical Society is to be held in Kansas City, April 11 to 14. The headquarters are at the Hotel Muehlbach. The complete program will be available about April 3.

In addition to the resolutions already noted in the JOURNAL (March and April editorials) the following was passed with enthusiasm.

"*Resolved*, That a hearty vote of thanks be extended by the American Home Economics Association to Mrs. Van Zile, chairman of the program committee; to the Kansas City Home Economics Association, who entertained us yesterday afternoon; to Miss Essie Heyle, our Kansas City hostess; and to all the other Kansas City teachers who have so generously contributed toward the making of our present meeting such a pleasant and profitable session."

The next meeting of the Division of Superintendence is to be held in Atlanta, Georgia.